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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,678	06/26/2003	Vincent J. Zimmer	42P16421	8063
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INTEL/BSTZ			EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/607,678

Applicant(s)

ZIMMER ET AL.

Examiner

BENJAMIN E. LANIER

Art Unit

2432

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 and 25-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant argues that paragraph 67 “demonstrates to one skilled in the relevant art that the inventors had possession of the claimed invention because, as conveyed in a described embodiment, the firmware (which is typically persistent memory and OS-independent) is used to support authentication in pre-boot.” This is not persuasive because paragraph 67 clearly states that the authentication credentials are retrieved “during pre-boot”, and then passed to the operating system “upon load or in response to a port authentication request in block 502,” which occurs post-boot (see Figure 5).
2. Applicant argues, “authentication during the operating system runtime phase is not necessarily mutually exclusive of authentication of the network port prior to booting of the operating system.” This argument is not persuasive because Applicant has claimed two completely different types of authentication for the same port.
3. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).
4. Applicant's arguments against the §103 rejections are not persuasive because the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) have been fully set forth.

5. Applicant argues, "the recitation of unpublished art does not properly and objectively resolve the level of skill of a person having ordinary skill in the relevant art at the time of the invention...the unpublished material is (instead) held to be in confidence by the USPTO." This argument is not persuasive because "Subject matter that is prior art under 35 USC 102 can be used to support a rejection under section 103." *Ex parte Andresen*, 212 USPQ 100, 102 (Bd. Pat. App. & Inter. 1981).
6. Applicant's reliance on *Ex parte Erlich* is misplaced for the simple reason that none of the prior art references "postdate the claimed invention".

Election/Restrictions

7. This application contains claims 15-20, 25-30 are drawn to an invention nonelected without traverse in the reply filed on 19 February 2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:
- The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
9. Claims 1-14, 21-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not support network port authentication during the pre-boot

phase as currently claimed. Applicant points to Figure 5 and the accompanying description for support. This section of the specification discloses that authentication credentials are retrieved/generated during the pre-boot phase, but the actual network port authentication does not occur until the operating system has actually booted and is running. Step 504 in Figure 5 shows performing port authentication via operating system using authentication credentials during OS-runtime. Figure 5 clearly shows that the actual port authentication occurs after the OS has booted and run.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-14, 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. The claims require performing network port authentication during the pre-boot phase using authentication credential that have yet to be received, which renders the claims indefinite because it is unclear how the authentication is performed using data that is not available for use. Subsequent claim limitations require booting, receiving credentials, and then performing authentication using received credentials. Therefore, for the purposes of examination the claims will be treated as having all operations occur after booting has occurred.

13. Claim 4 requires the network port to be authenticated during the operating system runtime phase, which directly contradicts claim 1, which requires the network port to be authenticated prior to booting of the operating system.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 1-4, 9-14, 21, 22, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roese, U.S. Publication 2004/0158735, in view of Buer, U.S. Publication No. 2004/0250126. Referring to claims 1-4, 10-12, 21, 22, 24, Roese discloses 802.1x network authentication wherein an endpoint device is authenticated for network access to a specified port utilizing firmware functions (Figure 1 & [0015] & [0030]), which meets the limitation of loading port authentication firmware instructions in a supplicant system during a pre-boot phase, authenticating a network port hosted by an authenticator system to which the supplicant system is linked via execution of the port authentication firmware instructions on the supplicant system, wherein the network port is authenticated during the pre-boot phase, booting an operating system in the supplicant system, loading an operating system image into the supplicant system over a network that is accessed via the network port that is authenticated, the network port is authenticated during an operating system (OS) runtime phase, the media comprises a firmware

storage device. Roese does not specify port authentication using an access/challenge scheme. Buer discloses port authentication using an access/challenge scheme that employs a transport layer security (TLS) challenge response in which authentication is determined based on credentials provided by the supplicant system, the TLS challenge response employs credentials stored in a Trusted Platform Module (TPM), and wherein the method further comprises retrieving the credentials from the TPM ([0022]-[0026]), which meets the limitation of passing the authentication credentials to the booted operating system, using the passed authentication credentials and the booted operating system to perform a port authentication process, the port is authenticated using an access/challenge scheme, the access/challenge scheme employs a Transport Layer Security (TLS) challenge response in which authentication is determined based on credentials provided by the supplicant system, the TLS challenge response employs credentials stored in a Trusted Platform Module (TPM), and wherein the method further comprises retrieving the credentials from the TPM. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the authentication scheme of Roese to utilize the TPM and TLS protocol as described by Buer in order to allow direct communication with the network while circumventing the TCP/IP stack at the client machine as taught by Buer ([0024]-[0025]).

Referring to claim 9, Roese discloses authentication using EAP over LANs ([0007] & [00028]).

Referring to claim 13, Roese discloses a determination of whether a port is authenticated is made by an authentication server that is linked in communication with the authenticator system (Figure 1, 103).

Referring to claim 14, Roese discloses a callable interface via which a port authentication process can be invoked ([0025]).

17. Claims 5-8, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roese, U.S. Publication 2004/0158735, in view of Buer, U.S. Publication No. 2004/0250126, and further in view of Cotichini, U.S. Patent No. 6,300,863. Referring to claims 5-8, 23, Roese does not disclose that the firmware utilizes hidden execution mode transparent to the operation system. Cotichini discloses a CompuTrace agent that is adapted to work under an SMM environment that is triggered in response to an SMI event (Col. 30, lines 6-22), which meets the limitation of network port authentication is performed by executing the port authentication firmware using a hidden execution mode that is transparent to an operating system running on the suppliant system during the OS-runtime phase, the hidden execution mode is a system management mode (SMM), the firmware instructions are embedded as one or more SMM handlers, asserting an SMI on a processor of the suppliant on a periodic basis, dispatching said one or more SMM handlers to handle the SMI via operations, determining if a network port needs to be authentication, and in response, authenticating the network port. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a transparent agent similar to CompuTrace to perform authentication functions in Roese in order to provide independent transactions at regular intervals as taught by Cotichini (Col. 30, lines 6-9).

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN E. LANIER whose telephone number is (571)272-3805. The examiner can normally be reached on M-Th 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2432

/Benjamin E Lanier/

Primary Examiner, Art Unit 2432